
U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

Gordon P. Eaton, Director

Reston, VA 20192

For information, contact:

Larry D. Cunningham, Commodity Specialist

Telephone: (703) 648-4977, Fax: (703) 648-7757

E-mail: lcunning@usgs.gov

Kevin J. Bacon (Data), (703) 648-7957

MINES-DATA: (703) 648-7799

MINES FaxBack: (703) 648-4999

Internet: <http://minerals.er.usgs.gov/minerals>

SILICON IN JANUARY 1997

Domestic shipments of silicon ferroalloys and metal in **January 1997**, excluding silvery pig iron, increased by about 11% compared with shipments in December 1996, according to the U.S. Geological Survey. Overall production of silicon alloys and metal were down slightly.

December 1996 trade data are included in this report. Trade data for January 1997 were unavailable at the time of publication and will be included in a subsequent report. **In 1996, U.S. exports of ferrosilicon** increased by about 24% compared with that of 1995. About 36% of the material was shipped to Canada. **Silicon metal exports** were down by more

than 30%. Canada, Japan, the Republic of Korea, and Malaysia were the major recipients of the material, with over 60% of the total. For the same period, **U.S. imports of silicon-containing alloys** decreased by about 5%. Brazil, Iceland, and Norway were the leading suppliers with about 65% of the total. Overall **imports of silicon metal** were down by about 15%, with Russia supplying more than 30% of the total.

Published prices for silicon-based commodities are listed below (**Source: Platt's Metals Week**). Ferrosilicon prices are based on the contained weight of silicon. All prices are posted in cents per pound.

Dealer Import Prices

	<u>50% Ferrosilicon</u>	<u>75% Ferrosilicon</u>	<u>Silicon Metal</u>
January 3	63.0-65.0	52.0-56.0	85.0-88.0
January 10	"	51.0-55.0	"
January 17	"	50.0-54.0	"
January 24	"	"	"
January 31	53.0-56.0	48.0-50.0	"

TABLE 1
U.S. PRODUCTION, SHIPMENTS, AND PRODUCER STOCKS OF SILICON ALLOYS AND METAL 1/ 2/

(Metric tons)

Material	Gross production 3/		Net shipments		Stocks, January 1997
	January 1997	Year to date	January 1997	Year to date	
Silvery pig iron:					
Less than 25% silicon	W	W	W	W	W
Ferrosilicon:					
25-55% silicon	15,500	15,500	10,900	10,900	21,700
56-95% silicon	11,700	11,700	11,800	11,800	17,000
Silicon metal:					
Excludes semiconductor grades	15,800	15,800	16,100	16,100	5,110
Miscellaneous silicon alloys:					
Exclusive of silicomanganese	9,570	9,570	8,670	8,670	13,000

W Withheld to avoid disclosing company proprietary data.

1/ Data are rounded to three significant digits.

2/ Includes U.S. Geological Survey estimates.

3/ Ferrosilicon production includes material consumed in the production of miscellaneous silicon alloys.

TABLE 2
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN DECEMBER 1996 1/ 2/

(Metric tons)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Ferrosilicon:						
Over 55% silicon:						
Australia	--	--	--	49	34	\$81,100
Brazil	18	11	\$24,300	164	99	224,000
Canada	311	186	248,000	8,150	4,890	6,490,000
Germany	18	13	28,500	82	57	115,000
Japan	--	--	--	18	11	22,800
Korea, Republic of	78	47	62,200	887	532	789,000
Malaysia	17	13	25,800	50	38	79,200
Mexico	344	209	304,000	3,020	1,890	2,670,000
Venezuela	--	--	--	27	16	22,500
Total	785	479	693,000	12,400	7,560	10,500,000
Other ferrosilicon:						
Australia	73	36	66,400	1,720	860	1,600,000
Canada	562	281	400,000	10,700	5,340	8,420,000
China	20	10	51,900	413	240	598,000
India	40	20	51,800	1,660	829	2,990,000
Japan	660	330	522,000	4,840	2,420	8,030,000
Korea, Republic of	--	--	--	1,180	588	1,450,000
Mexico	122	61	138,000	1,670	827	1,560,000
Taiwan	--	--	--	238	119	280,000
Turkey	40	20	37,900	394	197	395,000
United Kingdom	2,030	1,010	1,120,000	15,100	7,560	8,670,000
Other (13 countries)	91	46	112,000	1,360	681	1,570,000
Total	3,630	1,820	2,500,000	39,300	19,700	35,600,000
Total ferrosilicon	4,420	2,300	3,190,000	51,700	27,200	46,100,000
Metal:						
Over 99.99% silicon:						
China	7	7	404,000	77	77	3,350,000
Denmark	2	2	183,000	45	45	3,810,000
Germany	14	14	698,000	79	79	4,180,000
Italy	--	--	--	50	50	1,140,000
Japan	117	117	8,480,000	1,450	1,450	88,900,000
Korea, Republic of	60	60	2,100,000	633	633	27,700,000
Malaysia	14	14	3,640,000	179	179	45,100,000
Netherlands	2	2	130,000	39	39	1,840,000
Poland	--	--	--	31	31	1,380,000
Taiwan	7	7	270,000	50	50	1,980,000
Other (33 countries)	3	3	313,000	122	122	8,330,000
Total	225	225	16,200,000	2,750	2,750	188,000,000
99.00 - 99.99% silicon:						
Belgium	--	--	--	18	18	25,200
Germany	--	--	--	24	23	50,700
Ghana	61	60	126,000	118	117	229,000
Israel	--	--	--	335	332	786,000
Japan	--	--	--	307	305	854,000
Korea, Republic of	--	--	--	1,320	1,310	1,860,000
Malaysia	--	--	--	2,270	2,250	3,200,000
Mexico	36	36	104,000	267	265	441,000
Trinidad and Tobago	--	--	--	200	198	138,000
United Kingdom	--	--	--	283	280	399,000
Other (11 countries)	2	2	2,640	44	43	63,200
Total	99	98	232,000	5,180	5,140	8,050,000
Other silicon:						
Australia	--	--	--	185	179	257,000
Canada	58	57	66,000	3,260	3,170	3,440,000
China	97	94	128,000	492	478	660,000
Germany	16	16	26,800	344	334	499,000
Hong Kong	--	--	--	258	250	347,000
Japan	59	57	278,000	969	940	2,130,000
Korea, Republic of	33	32	65,600	363	352	633,000

See footnotes at end of table.

TABLE 2
U.S. EXPORTS OF FERROSILICON AND SILICON METAL IN DECEMBER 1996 1/ 2/

(Metric tons)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Metal--Continued:						
Other silicon--Continued:						
Mexico	85	82	138,000	1,130	1,100	1,870,000
Taiwan	75	73	98,900	1,180	1,140	1,630,000
United Kingdom	37	36	49,100	267	260	384,000
Other (30 countries)	4	4	8,300	627	609	1,350,000
Total	464	450	859,000	9,080	8,820	13,200,000
Total silicon metal	788	774	17,300,000	17,000	16,700	209,000,000

1/ Monthly data are based on the year to date quantities (gross weight) of the top ten countries.

2/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN DECEMBER 1996 1/ 2/

(Metric tons)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Ferrosilicon:						
55 - 80% silicon, over 3% Ca:						
Canada	--	--	--	1	1	\$1,590
Egypt	--	--	--	708	517	620,000
France	--	--	--	330	204	466,000
United Kingdom	--	--	--	27	19	155,000
Total	--	--	--	1,070	740	1,240,000
55 - 80% silicon, Other:						
Brazil	--	--	--	18,400	14,000	16,100,000
Canada	326	250	\$312,000	4,800	3,630	4,350,000
Egypt	--	--	--	9,480	6,750	8,010,000
Iceland	2,160	1,650	1,860,000	33,400	25,300	29,800,000
Italy	--	--	--	4,400	3,280	3,660,000
Macedonia	--	--	--	6,750	5,060	5,610,000
Norway	3,900	2,880	3,580,000	76,000	57,300	71,800,000
Poland	--	--	--	11,600	8,660	9,740,000
Romania	83	63	64,400	4,000	3,000	3,320,000
South Africa	--	--	--	3,590	2,750	3,230,000
Other (10 countries)	407	307	519,000	7,910	5,900	8,760,000
Total	6,880	5,150	6,340,000	180,000	136,000	164,000,000
80 - 90% ferrosilicon:						
Argentina	158	128	146,000	1,720	1,390	1,530,000
Canada	19	15	12,800	19	15	12,800
Total	177	144	159,000	1,740	1,400	1,540,000
Over 90% ferrosilicon:						
Italy	95	91	111,000	95	91	111,000
Romania	--	--	--	82	77	94,900
Total	95	91	111,000	177	168	206,000
Magnesium ferrosilicon:						
Brazil	571	263	604,000	5,010	2,300	4,840,000
Canada	69	30	69,900	1,620	772	1,330,000
China	--	--	--	72	19	73,400
Germany	2	1	8,270	66	33	172,000
Japan	16	2	36,700	132	55	285,000
Norway	184	82	244,000	2,010	926	2,530,000
Total	842	378	963,000	8,910	4,100	9,230,000

See footnotes at end of table.

TABLE 3--Continued
U.S. IMPORTS FOR CONSUMPTION OF FERROSILICON AND SILICON METAL IN DECEMBER 1996 1/ 2/

(Metric tons)

Country	Gross weight	Contained weight	Value	Year to date		
				Gross weight	Contained weight	Value
Ferrosilicon--Continued:						
Other ferrosilicon:						
Brazil 3/	40	4	44,000	390	184	439,000
Canada 3/	932	275	652,000	10,700	3,170	5,790,000
China 3/	999	150	120,000	999	150	120,000
Egypt	--	--	--	2,260	1,190	823,000
Mexico	--	--	--	1	(4/)	1,300
Norway	--	--	--	1,310	647	1,010,000
Poland	--	--	--	1,210	588	594,000
South Africa	--	--	--	9	2	7,550
United Kingdom	--	--	--	5	2	18,700
Total	1,970	429	816,000	16,900	5,930	8,810,000
Total ferrosilicon	9,960	6,190	8,390,000	209,000	148,000	185,000,000
Metal:						
Over 99.99% silicon:						
Australia	20	20	40,600	40	40	78,800
China	1	1	140,000	39	39	6,400,000
Germany	84	84	4,810,000	725	725	38,900,000
Italy	27	27	1,440,000	183	183	18,700,000
Japan	59	59	1,460,000	249	249	11,100,000
Korea, Republic of	12	12	264,000	185	185	9,750,000
Russia	1	1	128,000	24	24	3,680,000
Taiwan	2	2	23,700	12	12	576,000
Ukraine	(4/)	(4/)	40,500	12	12	609,000
United Kingdom	5	5	196,000	33	33	1,750,000
Other (13 countries)	4	4	70,000	16	16	788,000
Total	215	215	8,620,000	1,520	1,520	92,400,000
99.00 - 99.99% silicon:						
Australia	120	119	194,000	3,810	3,760	5,970,000
Brazil	428	424	750,000	10,300	9,700	17,300,000
Canada	817	811	1,310,000	12,800	12,700	20,000,000
China	120	119	156,000	183	181	230,000
France	397	394	694,000	6,930	6,880	11,900,000
India	504	501	831,000	1,130	1,120	1,860,000
Norway	100	99	194,000	2,010	2,000	3,870,000
Romania	--	--	--	492	489	596,000
South Africa	--	--	--	1,280	1,270	1,910,000
Spain	--	--	--	860	852	1,390,000
Other (6 countries)	4	3	23,800	185	184	404,000
Total	2,490	2,470	4,150,000	40,000	39,100	65,400,000
Other silicon:						
Brazil	--	--	--	618	595	1,010,000
Canada	91	90	169,000	779	761	1,280,000
China	287	265	378,000	3,210	3,020	3,860,000
India	80	79	130,000	1,130	1,090	1,880,000
Japan	272	261	307,000	282	270	355,000
Macedonia	--	--	--	1,100	1,080	1,830,000
Romania	40	39	46,800	344	336	459,000
Russia	278	271	418,000	27,900	26,100	38,600,000
South Africa	--	--	--	3,510	3,440	4,830,000
Spain	--	--	--	397	389	632,000
Other (14 countries)	37	36	69,700	1,080	995	1,630,000
Total	1,080	1,040	1,520,000	40,300	38,100	56,400,000
Total silicon metal	3,790	3,730	14,300,000	81,800	78,800	214,000,000

1/ Monthly data are based on the year to date quantities (gross weight) of the top ten countries.

2/ Data are rounded to three significant digits; may not add to totals shown.

3/ All or part of these data have been referred to the Bureau of the Census for verification.

4/ Less than ½ unit.

Source: Bureau of the Census.